

DECLARATION UNDER 37 C.F.R. § 1.132

I, Masayuki Nagamine, declare and state as follows:

1. I am a co-inventor of the subject matter claimed in U.S. Patent Application 09/656,777 entitled, "POSITIVE ELECTRODE ACTIVE MATERIAL FOR A NON-AQUEOUS ELECTROLYTE CELL AND NON-AQUEOUS ELECTROLYTE CELL USING THE SAME", which claims priority to Japanese Application No. P11-254589, filed September 8, 1999.
2. I have reviewed the results of experiments, including those cited in the specification, comparing the invention claimed in the above-referenced application with the processes disclosed in U.S. Patent No. 6,093,503 (Isayama) and U.S. Patent No. 6,093,503 (Miyasaka), which were cited against pending claims 23-28 of the above-referenced Application in an Office Action dated May 17, 2006. One of the experiments was performed as follows:
  - (a) To create primary examples of positive electrode active material, a predetermined composition of 2 kg of lithium raw material, a manganese raw material, and an additional raw material was mixed in a rotary ball mill for five hours. Next, the raw material mixture was molded by a pressurized tablet molding apparatus under 400 kgf/cm<sup>2</sup> of pressure and then sintered in the atmosphere at 800°C for 15 hours. The sintered material was crushed in a vibration type ball mill for 10 minutes. See specification, page 10, lines 14-19.
  - (b) To create comparative examples of positive electrode active material, the same raw material composition described above was mixed in the rotary ball mill for 5 hours and then, without being subjected to pressurized molding, sintered at 800°C for 15 hours. The sintered mixture was then crushed in the vibration type ball mill for 5 minutes and for 10 minutes to obtain various samples. See page 10, line 20, to page 11, line 3.
3. The results of the experiments discussed above show unexpected differences between molding the mixture under pressure before sintering the mixture and sintering the mixture without first pressure molding the mixture. Specifically, molding the mixture under pressure before sintering the mixture results in a material having

primary particle diameters and specific surface areas within desired ranges. See U.S. Patent Application 09/666,777 page 11, Table 1, Examples 1-1 to 1-6, and page 14, lines 10-13, of the specification. The desired particle diameters and specific surface areas result in preferable cell cycle capacity ratios and discharge capacity ratios. See id., pages 13 and 14, Table 2, Examples 1-1 to 1-6, and page 14, lines 10-13. In contrast, the comparative examples resulted in undesired particle diameters and specific surface areas. See id., page 11, Table 1, Comparative Examples 1-1 to 1-3, and page 14, lines 14-17. The undesired particle diameters and specific surface areas of the comparative examples result in undesirably low cell cycle capacity ratios or discharge capacity ratios. See id., pages 13 and 14, Table 2, Comparative Examples 1-1 to 1-3, and page 14, lines 14-17. Because the processes according to the prior art also include sintering a mixture without first pressure molding, the comparative examples of the experiment illustrate that the particle diameters and specific surface areas of materials produced according to the prior art, including Isoyama, would be outside of the claimed desired ranges. In addition, because pressure molding a mixture before sintering the mixture is not needed in the prior art methods, it would not have been apparent for one skilled in the art to perform the claimed steps in the claimed order, especially considering that the material is re-powderized after sintering.

4. I hereby declare that the statements made of my own knowledge are true and that all statements made on information or belief are believed to be true. I acknowledge that willful false statements and the like are punishable by fine or imprisonment or both (18 U.S.C. § 1001) and may jeopardize the validity of this application or any patent issuing therefrom.

Date:

September, 22, 2006Masayuki Nagamine  
Masayuki Nagamine